

## CLAIMS

What is claimed is:

1. An optical communication apparatus comprising:  
an optical modulating means for modulating input light  
5 in accordance with a modulation signal to be transmitted;  
an optical branching means for branching a modulated  
optical signal that is exit from said optical modulating means  
into a first branched optical signal and a second branched  
optical signal;

10 an operating point controlling means for controlling  
said optical modulating means in accordance with said second  
branched optical signal exit from said optical branching  
means; and

15 a stabilizing means for controlling said operating point  
controlling means in accordance with the intensity of light  
in said optical modulating means.

2. An optical communication apparatus according to  
claim 1, wherein said stabilizing means comprises:

20 an input light branching means for branching light  
entered to an input port into a first branched input light and  
a second branched input light;

an optical detecting means for detecting the light  
intensity of said second branched input light exit from said  
input light branching means, and

25 a controlling means for controlling said operating point  
controlling means in accordance with said light intensity that  
is detected by said optical detecting means.

30 3. An optical communication apparatus according to  
claim 1, wherein said stabilizing means further comprises an  
optical detecting means for detecting said light intensity of  
said optical modulating means.

35 4. An optical communication apparatus according to  
claim 1, wherein said stabilizing means controls an operating  
point of said operating point controlling means to a  
predetermined value within a control range.

5. An optical communication apparatus according to  
claim 1, wherein said stabilizing means comprises a modulation

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signal detecting means for detecting the intensity of said modulation signal and a controlling means for controlling said operating point controlling means in accordance with said signal intensity that is detected by said modulation signal detecting means.

6. An optical communication apparatus comprising an optical modulating means for modulating input light in accordance with a modulation signal to be transmitted and a regulating means for regulating the intensity of light which is transmitted through an optical transmission line from said optical modulation means.

7. An optical communication apparatus according to claim 6, wherein said regulating means is an optical attenuating means for attenuating intensity of light entered to an input port of said optical modulating means in accordance with the intensity of light in said optical modulating means.

8. An optical communication apparatus according to claim 6, wherein said regulating means is an optical attenuating means for attenuating the intensity of light entered to an input port of said optical modulating means in accordance with the intensity of said modulation signal.

9. An optical communication apparatus according to claim 6, wherein said regulating means is an optical attenuating means for attenuating the intensity of light exit from an output port of said optical modulating means in accordance with the intensity of light in said optical modulating means.

10. An optical communication apparatus according to claim 6, wherein said regulating means is an optical attenuating means for attenuating the intensity of light exit from an output port of said optical modulating means in accordance with the intensity of said modulation signal.

11. An optical communication apparatus according to claim 6, wherein said regulating means is a modulation controlling means for switching said optical modulating means in accordance with the intensity of light in said optical modulating means.

12. An optical communication apparatus according to claim 6, wherein said regulating means is a modulation controlling means for switching said optical modulating means in accordance with the intensity of said modulation signal.

5 13. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light entered to an input port of said optical modulating means in accordance with the intensity of light in said optical modulating means.

10 14. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light exit from an output port of said optical modulating means in accordance with the intensity of light in said optical modulating means.

15 15. An optical communication apparatus according to claim 1, wherein further comprising a modulation controlling means for switching said optical modulating means in accordance with the intensity of light in said optical modulating means.

20 16. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light entered to an input port of said optical modulating means in accordance with the intensity of said modulation signal.

25 17. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light exit from an output port of said optical modulating means in accordance with the intensity of said modulation signal.

30 18. An optical communication apparatus according to claim 1, wherein further comprising a modulation controlling means for switching said optical modulating means in accordance with the intensity of said modulation signal.

35 19. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light entered to an input port of said optical modulating means in accordance with

the intensity of light in said optical modulating means and the intensity of said modulation signal.

20. An optical communication apparatus according to claim 1, wherein further comprising an optical attenuating means for attenuating the intensity of light exit from an output port of said optical modulating means in accordance with the intensity of light in said optical modulating means and the intensity of said modulation signal.

21. An optical communication apparatus according to claim 1, wherein further comprising a modulation controlling means for switching said optical modulating means in accordance with the intensity of light in said optical modulating means and the intensity of said modulation signal.

22. An optical add/drop apparatus for adding and dropping an optical signal to and from wavelength-division multiplexed optical signal, which transmits through an optical transmission line, comprising:

an optical modulating means for modulating input light in accordance with a modulation signal to be transmitted;

an optical branching means for branching said modulated optical signal that is exit from said optical modulating means into a first branched optical signal and a second branched optical signal;

an operating point controlling means for controlling said optical modulating means in accordance with said second branched optical signal exit from said optical branching means; and

a controlling means for controlling said operating point controlling means in accordance with the intensity of light in said optical modulating means.

23. An optical add/drop apparatus for adding and dropping an optical signal to and from wavelength-division multiplexed optical signal, which transmits through an optical transmission line, comprising:

an optical modulating means for modulating input light in accordance with a modulation signal to be transmitted and a regulating means for regulating the intensity of light

which is transmitted to said optical transmission line from  
said optical modulation means.

add  
a1  
add  
b1

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